HPG axis activity in juvenile blotched blue-tongued skinks, *Tiliqua nigrolutea*

Ashley Edwards[1] and Susan M Jones

[1] *School of Zoology, University of Tasmania, Hobart TAS 7001*

We are investigating seasonal sex- and age-related differences in the activity of the hypothalamic-pituitary-gonadal axis in the blotched blue-tongued lizard, *Tiliqua nigrolutea* as part of an overall study of the onset of sexual maturation and its subsequent annual regulation in a seasonally-breeding, viviparous reptile. Males of this species breed annually, while females exhibit a multiennial cycle; age at maturity is unknown. Juveniles at ages 1, 6, 12, 18, 24 and 30 months of age were injected with GnRH and we measured the resulting plasma sex steroid (testosterone (T) and oestradiol (E2)) concentrations, to examine the age of onset of HPG axis regulation: we plan to follow these juveniles over time until sexual maturity is reached. We found clear sex- and age-related differences in the production of T and E2 (as a measure of the activity of the HPG axis) from a relatively early age. We have used a number of techniques to confirm sex in these juveniles, and have correlated this with changes in T:E2 at ages 24 and 30 months. This longitudinal study of juveniles of (now) known sexes has allowed us to examine characteristics such as head width and body size (growth) for the onset of the sexual dimorphisms observed in adults. We have correlated these to endocrine profiles and other aspects of life history.